

# Pseudoclefts in Japanese\*

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May 1, 1996

## 1 Introduction

Japanese has a construction closely resembling pseudoclefts in English as shown below.<sup>1</sup>

- (1) [ Ken-ga t katta ] -no-wa piano-da.  
Ken-NOM (obj) bought -NML-TOP piano-COP  
“What Ken bought is a piano.”

The phrase of the form “[...gap...]-no-wa/ga” is like a free relative and the pattern “A-wa/ga B-da” is considered a copular construction. Since Japanese and English are quite different and contrastive in many aspects, such superficial resemblance does not tell us much. It is interesting, though, to see if Japanese pseudoclefts are really like English based on various properties associated with the constructions.

One of many interesting aspects is the distinction between *predicational* and *specificational* reading [Higgins, 1979]. Often, the reading is ambiguous. But it has been observed that only the specificational reading exhibits *syntactic connectivity*. An example of binding connectivity from English is shown below.<sup>2</sup>

- (2) a. What Mary<sub>i</sub> was was proud of herself<sub>i/\*j</sub>. (specificational)  
b. What Mary<sub>i</sub> was was proud of her<sub>\*i/j</sub>. (predicational)

(a) shows Condition A binding effect even though the reflexive is not c-commanded by its binder. This situation is exactly like in the corresponding sentence “Mary was proud of herself.” German shows case connectivity as follows:<sup>3</sup>

- (3) a. Was Hans essen wollte war einen apfel.  
what Hans eat wanted was an-ACC apple  
“What Hans wanted to eat was an apple.” (specificational)  
b. Was Hans essen wollte war ein apfel.  
what Hans eat wanted was an-NOM apple  
“What Hans wanted to eat was an apple.” (predicational)

An accusative marking of an NP in (a) is unexpected and possible only in specificational pseudoclefts.

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\*I thank Tony Kroch and Sabine Iatridou for numerous helpful advices throught the course of the workshop and patiently teaching me how to conduct a linguistic research. I also thank Gene Vachon and Seth Kulick for their comments during the discussion. This is the final version of the paper submitted for LING555, Workshop in Syntax/Semantics, Spring 1996.

<sup>1</sup>The labels for the particles are for illustrative purposes only. The labels used in this paper are: TOP = topic, NOM = nominative, ACC = accusative, DAT = daitve, INSTR = instrumental, GEN = genitive COP = copula, Q = question, COMP = complementizer, NML = nominalizer, NEG = negative, PL = plural.

<sup>2</sup>From [Heycock and Kroch, 1995].

<sup>3</sup>From [Iatridou and Varlokosta, 1995].

Still another possibility is the case like Modern Greek [Iatridou and Varlokosta, 1995]. Modern Greek is claimed to have no specificational pseudoclefts due to the lexical properties associated with free relatives.

How does the pseudocleft-like construction in Japanese compare with these phenomena in other languages? How do the syntax and semantics of copular construction and free relatives differ from English? Would the use of topic marker *wa* and case particle *ga* affect the analysis? Do any of the analysis considered for Japanese generalized to other languages?

In this paper, I will attempt to answer these and other related questions. The main results are that Japanese has both predicational and specificational pseudoclefts and only specificational pseudoclefts are associated with binding connectivity like English. Throughout the paper, I will attempt to identify the semantic type, as well as other syntactic and semantic properties, of the constructions of interest. I expect that the classification based on semantic types improves to clarify the interface between the building blocks.

The paper is organized as follows: Section 2 reviews the copular construction. Section 3 presents the data concerning the distribution of free relatives, especially focusing on the difference between the first copular position and other positions. Section 4 explores predicational and specificational pseudoclefts. Syntactic connectivity plays an important role to distinguish between the two. Several inconclusive topics are discussed in Section 5.

## 2 Copular Construction

As the basic component of pseudocleft construction, it will be beneficial to briefly go over Japanese copular construction in this section. Reflecting the strictly head-final characteristics of Japanese, copular construction takes the form of “A + B + cop”, apparently different from the pattern “A + cop + B” seen in English. The difference between asymmetric and symmetric pattern seems substantial. Another crucial difference is that Japanese do not have the system of determiners corresponding to the one in English. This will complicate the analysis of semantic types as will be seen shortly. In particular, I will attempt to answer the following questions:

- (4)
  - a. Does the difference between *wa* and *ga* used in copular sentences affect the analysis in this paper? If so, how can we minimize the effect?
  - b. What are the syntactic categories and associated semantic types at each position in various copular sentences?
  - c. How can we classify copular sentences based on semantic types?
  - d. Which class of copular sentences can be inverted?

Initially, being influenced by Higgins and Williams, I tried to include *referentiality* within the classification of copular construction, and for other parts of this paper. Unfortunately, I could not clarify the relevant issues including the definition of referentiality. Thus most of analysis relevant to semantics is dealt within the analysis of *semantic type*, as discussed in textbooks like [Gamut, 1991]. I will attempt some analysis related to this point in Section 5.1 but otherwise the remaining problems are left as future research.

After making some general remarks about copular construction, different types of constituents and semantic types are discussed for the second and first copular positions. Then some complex cases involving higher-order types and a peculiar class of copular construction will be introduced.

### 2.1 General Remarks

Let us look at a typical subject-predicate construction with one-place predicates.

- (5)
  - a. Ken    -wa/ga       [gorufaa]<sub>NP</sub>   -da.  
      Ken   -TOP/NOM   golfer        -COP

- “Ken is a golfer.”
- b. Ken -wa/ga [kuuruda]<sub>AdjP</sub>  
 Ken -TOP/NOM cool  
 “Ken is cool.”
- c. Ken -wa/ga [aruku]<sub>VP</sub>  
 Ken -TOP/NOM walk  
 “Ken walks.”

(a) is a copular sentence with the copula at the sentence final position, on which I will focus in this section. Although (b) looks very close to (a) with the same *da* ending, I will not consider it as copular. In (a), *gorufaa* “golfer” is an NP, which can be case-marked as in *gorufaa-ga*. On the other hand, in (b), *kuuru* “cool” is the bound root of the adjective and not a free NP; it cannot be case-marked as in *\*kuuru-ga*. But the adjective-final construction will be used to introduce clearly predicative environment. Japanese predicative adjectives are like one-place verbs shown in (c).

The choice between *wa* and *ga* in this type of subject-predicate sentences roughly corresponds to topic/focus contrast as seen in the following examples:<sup>4,5</sup>

- (6) a. Ken -wa nani -na -no? <sup>6</sup>  
 Ken -TOP what -COP -Q  
 “What is Ken?”
- b. [Ken]<sub>Topic</sub> -wa [GORUFAA]<sub>Focus</sub> -da.  
 Ken -TOP golfer -COP  
 “Ken is a GOLFER.”
- (7) a. Dare -ga gorufaa -na -no?  
 who -NOM golfer -COP -Q  
 “Who is a golfer.”
- b. [KEN]<sub>Focus</sub> -ga [gorufaa]<sub>Topic</sub> -da.  
 Ken -NOM golfer -COP  
 “KEN is a golfer.”

Since this type of pragmatic marking presumably introduces a different structure from the underlying one, we need to construct an environment where such an effect is excluded. Let us consider the structure (b) below to provide such an embedded environment for (a).

- (8) a. A -wa/ga B -da.  
 A -TOP/NOM B -COP  
 “A is B.”
- b. X-wa [NP [CP A-ga B-da-toiu ] hanasi-o ] kiita. <sup>7</sup>  
 X-TOP A-NOM B-COP-COMP story-ACC heard  
 “X heard [a/the story [that A is B]].”

Due to the strictly head-final structure of Japanese and the possibility of relatively free extraction from a lower clause, the following structure cannot be distinguished from (b) above.

- (9) X-wa A<sub>i</sub>-ga [NP [CP t<sub>i</sub> B-da-toiu ] hanasi-o ] kiita.  
 X-TOP A-NOM B-COP-COMP story-ACC heard

<sup>4</sup>I believe that phonological prominence, in addition to the morphological marking, is relevant to information structure but will ignore them in this report.

<sup>5</sup>*wa* is generally considered as an adverbial particle and can be suffixed to wide range of NPs. When *wa* is present, case markers such as *ga* and *o* do not show up.

<sup>6</sup>*na* is an allomorph of the copula *da* and appears when it is followed by another bound form.

<sup>7</sup>The labels on the brackets are tentative.

“X heard the story that A is B (with focus on A).”

Now consider the case where the NP headed by *hanasi* “story” is premodified by *reino* “aforementioned”, also glossed as “that” for space reasons. Now the extraction of ‘A’ is not possible any more as seen in (a) and the structure like (b) is enforced.

- (10) a. \* X-wa A<sub>i</sub>-ga [NP reino [CP t<sub>i</sub> B-da-toiu ] hanasi-o ] kiita.  
           X-TOP A-NOM that B-COP-COMP story-ACC heard  
           “X heard that story that A is B.”
- b. X-wa [NP reino [CP A-ga B-da-toiu ] hanasi-o ] kiita.  
       X-TOP that A-NOM B-COP-COMP story-ACC heard  
       “X heard that story that A is B.”

A residual problem with (b) above is that *reino* may modify ‘A’ in place of *hanasi*. To avoid this possibility, insert an adverb *kakuzituni* “certainly”, at the beginning of the CP as follows:

- (11) X-wa [NP reino [CP kakuzituni A-ga B-da-toiu ] hanasi-o ] kiita.  
       X-TOP that certainly A-NOM B-COP-COMP story-ACC heard  
       “X heard [that story [that A is certainly B]].”

This gives us a rigid structure with an embedded clause free of the effect of topic/focus-related operations.<sup>8</sup> In this environment, *wa* cannot be used. For readability reasons, I will not repeat this environment for each copular sentence. But whenever the pragmatic influence is suspected, we should be able to eliminate the influence by explicitly embedding the copular sentence in this environment. I will occasionally indicate the necessity of such an environment by finishing the sentence with ‘-’, representing continuation, but not with ‘.’.

A few additional remarks are in order. I will represent semantic type as  $e$ ,  $\langle e, t \rangle$ ,  $\langle \langle e, t \rangle, t \rangle$ , etc., as widely practiced in Montagovian and other traditions [Gamut, 1991]. I will also use expression such as ‘ $e - \langle e, t \rangle$ ’ to represent the semantic types corresponding to two copular positions. Although there are other forms of copular, *dearu* and *desu*, I will concentrate on the form of *da* in this paper.

## 2.2 Second Copular Position

Proper nouns and demonstratives can appear at the second copular position, forming *equative* ‘ $e - e$ ’ sentences as follows:

- (12) a. Ano hito-ga Ken<sub>e</sub>-da.  
           that person-NOM Ken-COP  
           “That person is Ken.”
- b. Ken-ga [ano gorufaa]<sub>e</sub>-da.  
       Ken-NOM that golfer-COP  
       “Ken is that golfer.”

This corresponds to the use of proper nouns and demonstratives at the post-copular position in English. The semantic type of copula in this particular situation seems to be type  $\langle e, \langle e, t \rangle \rangle$ . Although it may be possible to provide a unified account of copular semantics as in [Partee, 1986a], I will not pursue that direction and simply indicate the type of particular instance.

A common NP at this position may have type  $\langle e, t \rangle$  or  $e$ . Unless there is a context to force the common NP to have type  $e$ , it has the unmarked type of  $\langle e, t \rangle$  as follows:

<sup>8</sup>The use of a sentential adverb alone might be good enough to achieve this goal. But the position of adverb itself can be complicated, and I think that the use of *reino* is more straightforward in this case.

- (13) Ken-ga gorufaa<sub>(e,t)</sub>-da.  
 Ken-NOM golfer-COP  
 “Ken is a golfer.”

This is a *predicative* sentence. The copular semantics would be type  $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$ , which vacuously reflect the type of the common noun. If the above sentence is negated, it does not entail the existence of any individual as in the case of the negation of ‘ $e - e$ ’ sentences.

- (14) a. Ken-ga gorufaa<sub>(e,t)</sub>-de-nai.  
 Ken-NOM golfer-COP-NEG  
 “Ken is not a golfer.”  
 b. Ken-ga ano gorufaa<sub>e</sub>-de-nai.  
 Ken-NOM that golfer-COP-NEG  
 “Ken is not that golfer.”

We can insert a predicate modifier *itioo* “more or less” in front of the predicate as follows:

- (15) Ken-ga itioo gorufaa<sub>(e,t)</sub>-da.  
 Ken-NOM more.or.less golfer-COP  
 “Ken is more or less a golfer.”

This is not possible for equative sentences.

- (16) \* Ken-ga itioo ano gorufaa<sub>e</sub>-da.  
 Ken-NOM more.or.less that golfer-COP  
 “Ken is more or less that golfer.”

On the contrary, *reino* “aforementioned” cannot modify a predicate. Thus as in the following example, ‘ $e - \langle e, t \rangle$ ’-type sentence is not possible with *reino* modifying the second copular constituent.

- (17) \* Ken-ga reino itioo gorufaa<sub>(e,t)</sub>-da.  
 Ken-NOM aforementioned more.or.less golfer-COP  
 “Ken is aforementioned more or less a golfer.”

So far, the use of type- $e$  common NP at the second copular position corresponds to the use of indefinite NP at post-copular position in English.

When the context allows, the common NP at second copular position can have type  $e$  as in the following example:

- (18) Q: “Can you see the golfer and the caddie over there? Who is that golfer?”  
 A: Ken-ga (ano) gorufaa<sub>e</sub>-da.  
 Ken-NOM that golfer-COP  
 “Ken is that golfer.”

*ano* “that” is optional. *itioo* cannot be used in this context as seen in the following:

- (19) Q: “Can you see the golfer and the caddie over there? Who is that golfer?”  
 A: \* Ken-ga itioo (ano) gorufaa<sub>e</sub>-da.  
 Ken-NOM more.or.less that golfer-COP  
 “Ken is more or less (that) golfer.”

The ambiguity of the common NP at the second copular position parallels that of definite NPs at the post-copular position in English. Consider the sentence “John is the right person” in the following contexts:

- (20) a. I am going to introduce you the right person for this project. John is the right person<sub>*e*</sub>.  
 b. This project requires a meticulous person. John is the right person <sub>$\langle e, t \rangle$</sub> .

We may regard the type of ‘the right person’ as above although in (b) the set consists of a single member.

Since the words *reino* and *itioo* will be used to distinguish predicative and equative sentences, let us summarize the test as follows:

(21)	Test	Copular type
	$A_e$ <i>reino</i> $B_e$ -da.	equative
	$A_e$ <i>itioo</i> $B_{\langle e, t \rangle}$ -da.	predicative

Note that the above test works for the cases where the first-copular constituent ‘A’ has type *e* but not necessarily with higher types.

A quantified NPs, of type  $\langle \langle e, t \rangle, t \rangle$ , cannot appear at the second copular position as seen in the following example.<sup>9</sup>

- (22) \* Karera-ga takusanno gorufaa <sub>$\langle \langle e, t \rangle, t \rangle$</sub> -da.  
 They-NOM many golfer-COP  
 “They are many golfers.”

### 2.3 First Copular Position

As we have already seen above, proper and demonstrative NPs can appear at the first copular position. Bare common NPs can also appear at this position. First, these may have type *e* as seen below.

- (23) Q: “Can you see the doctor and the nurse? Which is a golfer?”  
 A: Isya<sub>*e*</sub>-ga gorufaa-da.  
 doctor-NOM golfer-COP  
 “The doctor is a golfer.”

A common bare NP of type  $\langle e, t \rangle$  seems to be able to appear at the first copular position as follows:

- (24) Q: “Somebody there must be a doctor. Who is a doctor?”  
 A: Isya <sub>$\langle e, t \rangle$</sub> -wa/\*ga Ken-da.  
 doctor-TOP Ken-COP  
 “A doctor is Ken.”

Note that *isya* ‘doctor’ here does not have a referent and that *ga* is not acceptable. The inverse ‘Ken-ga isya-da’ ‘Ken is a doctor’ is perfectly fine. I argue that this ‘ $\langle e, t \rangle - e$ ’ is a result of matrix level inversion of the corresponding ‘ $e - \langle e, t \rangle$ ’ sentence. This is borne out by the following example:

- (25) Q: “Somebody there must be a doctor. I wonder who is a doctor. What story did you hear?”  
 A: \* Watasi-wa reino [ kakuzituni Isya <sub>$\langle e, t \rangle$</sub> -ga Ken-da ] -toiu hanasi-o  
 I-TOP that certainly doctor-NOM Ken-COP -COMP story-ACC  
 kiita.  
 heard  
 “I heard the story that a doctor is certainly Ken.”

The ‘ $\langle e, t \rangle - e$ ’-type copular clause cannot appear in the above environment. A ‘ $e - \langle e, t \rangle$ ’-type copular sentence does not have the inverse in general while ‘ $e - e$ ’ can.

A related case in English is as follows:

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<sup>9</sup>This observation applies to non-pseudocleft case only. We will discuss the case involving pseudoclefts in the relevant section.

- (26) a. I am going to introduce you the right person for this project. The right person<sub>*e*</sub> is John.  
 b. This project requires a meticulous person. The right person <sub>$\langle e, t \rangle$</sub> ? is John.

The second sentences in (a) and (b) are exactly the inverse of (20). But if the type of ‘the right person’ in (b) is  $\langle e, t \rangle$ , we have to admit ‘ $\langle e, t \rangle - e$ ’-type sentence. This is not compatible with the idea just proposed for Japanese that there is no ‘ $\langle e, t \rangle - e$ ’-type sentence. Alternatively, if the type of ‘the right person’ in (b) is *e*, can we distinguish (a) and (b) above with respect to referentiality? I have some relevant discussion in Section 5.1.

A quantified NP can appear at the first copular position as follows:

- (27) Takusanno isya <sub>$\langle \langle e, t \rangle, t \rangle$</sub> -ga gorufaa <sub>$\langle e, t \rangle$</sub> -da.  
 many doctor-NOM golfer-COP  
 “Many doctors are a golfer.”

A common NP can also have type  $\langle \langle e, t \rangle, t \rangle$ . The following example is ambiguous between *e* and  $\langle \langle e, t \rangle, t \rangle$ :

- (28) Isya-ga kanemoti-da.  
 doctor-NOM rich-COP  
 “Every doctor is rich.”<sup>10</sup>

*isya* “doctor” here can be considered quantificational. Notice that the example ‘*isya-ga gorufaa-da*’ (“A doctor is a golfer”) does not naturally rise to quantificational reading. Probably because of the semantic relation between the two NPs. “The doctors” and “the golfers” in “The doctors are golfers” do not naturally stand in an inclusion relation while “the doctor” is generally considered included in the set denoted by “the rich”.

## 2.4 Higher-Order Cases

Does the copula work for higher-order types? Consider the following example:

- (29) a. Gorufaa-ga eriito syuudan-da.  
 golfer-NOM elite group-COP  
 “The golfer is an elite group.”  
 b. \* Reino Gorufaa-ga eriito syuudan-da.  
 that golfer-NOM elite group-COP  
 “That golfer is an elite group.”  
 c. Reino tiimu-ga eriito syuudan-da.  
 that team-NOM elite group-COP  
 “That team is an elite group.”

Note that none of these can be equative since the inversion is not possible. (a) and (b) suggests that *gorufaa* “golfer” is not an individual in this case but a set, an argument of a higher-order predicate *syuudan* “group” of type  $\langle \langle e, t \rangle, t \rangle$ . But (c) suggests, if we continue to assume that *reino* “that” premodifies only type *e* and that *tiimu* “team” is a type *e* individual, then the predicate has type  $\langle e, t \rangle$ . A few possibilities are: (i) *syuudan* “group” is overloaded with multiple types and (ii) bare *gorufaa* “golfer” has type *e* but different sort from *reino gorufaa* and *syuudan* “group” predicates over these different sorts of type *e*.<sup>11</sup> I cannot advance the argument any further but there seems a possibility that the second copular constituent predicate over higher-types.

Let us consider the possibility of higher-order equative sentences with the following example:

<sup>10</sup> The sentence is ambiguous with a non-quantificational reading.

<sup>11</sup> The latter can be formalized within a framework based on many-sorted logic.

- (30) a. Iwayuru tori-ga kyooryuu-no sison-da.  
 so.called birds-NOM dinosaur-GEN descendent-COP  
 “The so-called bird is the descendent of dinosaur.”
- b. Kyooryuu-no sison-ga iwayuru tori-da.  
 dinosaur-GEN descendent-NOM so.called birds-COP  
 “The descendent of dinosaur is the so-called bird.”

(a) is not likely to be predicative nor quantificational since *iwayuru* “so-called” resists type  $e$  and  $\langle\langle e, t \rangle, t\rangle$  reading of the following NP. A possible sentence type is thus  $\langle e, t \rangle - \langle e, t \rangle$ . This is very likely since (a) can be inverted as in (b) and both have the same interpretation, equating the two sets. Although we cannot exclude the  $\langle\langle e, t \rangle, t\rangle - \langle e, t \rangle$ -type for (b), my point here is to show the possibility that copular sentences may have a higher types.

## 2.5 Relational Case

There is a peculiar case as follows:<sup>12</sup>

- (31) Ken-wa/?ga banana-da.  
 Ken-TOP/NOM banana-COP  
 “What Ken {wants to eat, likes, etc.} is a banana. (lit, Ken is a banana.)”

Logically, neither of the following is possible: (i) Ken equals banana nor (ii) Ken is in the set of banana. The inversion is not possible. Note that this kind of sentence does not naturally appear in an embedded environment nor with *ga* although I cannot rule out the possibility completely.

- (32) ?? X-wa reino [ kakuzituni Ken-ga banana-da ] -toiu hanasi-o kiita.  
 X-TOP that certainly Ken-NOM banana-COP -COMP story-ACC heard  
 “X heard about the story that Ken is certainly a banana.”

If the construction is associated with topicalization (thus marked with *wa*), we cannot expect it to appear in the above environment. I have a suspicion that this construction is related to specificational pseudoclefts as I suggested in the translation.

## 2.6 Summary

Syntactically, copular sentences take the form of “NP-*wa/ga* NP-*da*”. NP may be a common NP, proper NP, demonstrative NP, or quantified NP, and their distribution is basically determined by the semantic types. The following table is based on the classification of Japanese copular sentences by Masuoka and Takubo [1992] augmented with the corresponding semantic type:<sup>13</sup>

(33) Class	Type	Example
Equative	$X = X$	Ken-ga reino gorufaa-da. “Ken is that golfer.”
Predicative	$X \in \langle X, t \rangle$	Ken-ga kuuruda. “Ken is cool.”
(quantificational)	$\langle\langle X, t \rangle, t\rangle \in \langle X, t \rangle$	Ookuno gorufaa-ga kuuruda. “Many golfers are cool.”
Relational	$X \sim Y$	Ken-wa banana-da. “(What) Ken ... is a banana.”

Note: X and Y are variables over semantic types such as  $e$ ,  $\langle e, t \rangle$ , etc. As seen in the examples in this section, type  $e$  is predominant and the occurrence of higher types seem to be very limited.

<sup>12</sup>This class has been discussed widely. An often-cited example is: ‘Boku-wa unagi-da’ ‘I am an eel. (lit)’

<sup>13</sup>The symbols between the types are illustrative purposes only.



As has been observed with examples, predicative and relational cases cannot be inverted in general. Only the equative class can be inverted. This result will be extended to the analysis of pseudoclefts in a later section.

### 3 Free Relatives

The behavior of free relatives is crucial to the analysis of pseudoclefts. Since Japanese does not have wh-movement, the structure of free relative is different from those with wh-movement languages. In addition, the distribution of free relatives seems to be tied up with copular construction in a special way. In this section, I will attempt to answer the following questions:

- (34) a. What is the internal structure of free relatives?  
 b. What is the external distribution?  
 c. Can free relatives act as a predicate?  
 d. Do free relative show matching effect found in other languages?  
 e. How Japanese free relatives compare with *whatever* in English?

We will observe in this section that Japanese free relatives have fairly free internal structure but have strong constraint on external distribution except at the first copular position.

#### 3.1 Internal Structure

Let us look at headed relatives first.

- (35) a. [ [ *t* Naomi-o tazuneta ]<sub>CP</sub> hito-ga ]<sub>NP</sub> gorufaa-da.  
           (subj) Naomi-ACC visited person-NOM golfer-COP  
           “The person who visited Naomi is a golfer.”  
 b. [ Ken-ga *t* tabeta ] mono-ga mango-da.  
       Ken-NOM (obj) ate thing-NOM mango-COP  
       “The thing Ken ate is a mango.”  
 c. [ Ken-ga *t* kangaeta ] puran-ga saikooda.  
       Ken-NOM (CP) thought plan-NOM great  
       “The plan Ken thought is great.”  
 d. [ Ken-ga *t* banana-o katta ] mise-ga hikkosita.  
       Ken-NOM (adjunct) banana-ACC bought store-NOM moved  
       “The store Ken bought bananas has moved.”

Relativization of NP, CP, adjunct is possible from any position. The whole constituent can be case-marked and act exactly like other NPs. No relative clause nor head noun can be extracted from the entire constituent. Relative clauses are like adjectives, possessive, and demonstratives in Japanese. It seems that all these can recursively modify a noun in a fairly free order.

- (36) kono [ Ken-ga *t* tabeta ] nagai banana-ga  
       this Ken-NOM (ACC) ate long banana-NOM  
       “This long banana which Ken ate”

Free relatives can be obtained by replacing the head noun in a relative construction by the particle *no*, labelled NML (nominalizer) reflecting its general nominalizing function, as in the following examples.<sup>14,15</sup>

- (37) a. [ [ *t* Ken-o tazuneta ]<sub>CP</sub> -no-ga ]<sub>NP</sub> reino gorufaa-da.  
           (subj) Ken-ACC visited -NML-NOM that golfer-COP  
           “Who visited Ken is that golfer.”
- b. [ Ken-ga *t* tabeta ] -no-ga reino mango-da.  
       Ken-NOM (obj) ate -NML-NOM that mango-COP  
       “what Ken ate is that mango.”
- c. [ Ken-ga *t* kangaeta ] -no-ga reino puran-da.  
       Ken-NOM (CP) thought -NML-NOM that plan-COP  
       “What Ken thought is that plan.”
- d. [ Ken-ga *t* banana-o katta ] -no-ga reino mise-da.  
       Ken-NOM (adjunct) banana-ACC bought -NML-NOM that store-COP  
       “Where Ken bought the banana is that store.”

I will call this type of construction *free relative* (FR) since the head of NP is not lexical as compared to open-class lexical heads found in headed relatives. Note that there is no categorial matching effect; not only NPs but also adjuncts can be relativized as an NP. The predicate and the second copular constituent cannot be relativized in neither free relative nor headed relative as exemplified below.

- (38) a. \*[ Ken-ga *t* ] -no-ga aruita. <sup>16</sup>  
           Ken-NOM (verb, e.g., *walk*) -NML-NOM walked  
           “What Ken did was difficult.”
- b. \*[ Ken-ga *t* ] -no-ga bakageteiru.  
       Ken-NOM (adj, e.g., *silly*) -NML-NOM silly  
       “What Ken is is silly.”
- c. \*[ Ken-ga *t* -na ] -no-ga gorufaa-da.  
       Ken-NOM (NP, e.g., *golfer*) -COP -NML-NOM golfer-COP  
       “What Ken is is a golfer”

Structural analysis based on DP analysis is found in Section 5.3.

### 3.2 External Distribution

As seen in the previous section, a wide range of headed relatives have the FR counterpart and can appear at the first copular position, i.e., as pseudocleft. The following seems to be true: if we can construct a

<sup>14</sup> *no* is ambiguous at least with the sentence-final particle Q and the genitive marker GEN. I consider that *no* (NML) is different from *no* (Q) since the former never appears at the end of a matrix sentence but the latter only appears at this position. Another auxiliary verb *noda* may have derived from NML+COP but this also appears sentence-finally and used exclusively for intensifying the statement. Thus I will distinguish NML+COP where NML is a part of free relative construction from simple *noda* which can appear in any environment.

<sup>15</sup> I was told that Korean does not have an equivalent morpheme which can replace both person and thing.

<sup>16</sup> A compound verbs (N+light verb) like *benkyoo-suru* “study<sub>N</sub>-do” may break up and the N part can be relativized as in ‘[Ken-ga sita] benkyoo’ “the study Ken did”. Similarly, an clause-type object of the verb *suru* can be relativized as follows:

- (39) (a) Ken-ga [ ∅ aruku-koto ] -o suru.  
           Ken-NOM walk-COMP -ACC do  
           “Ken does walking.”
- (b) [ Ken-ga *t* suru ] -no-wa [ ∅ aruku-koto ] -da.  
       Ken-NOM do -NML-TOP walk-COMP -COP  
       “What Ken does is walking.”

grammatical free relative, it can appear at the first copular position. But if we look at other positions, the situation is quite different.

As the first case, let us look at the second copular position.

- (40) a. Kore-ga [ Ken-ga ryoorisita ] mono/no-da.  
 this-NOM Ken-NOM cooked thing/NML-COP  
 “This is the thing/what Ken cooked.”
- b. Kare-ga [ Ken-o tazuneta ] hito/\*no-da.  
 he-NOM Ken-ACC visited person/NML-COP  
 “He is the person/who visited Ken.”
- c. Kore-ga [ Ken-ga kangaeta ] puran/\*no-da.  
 thi-NOM Ken-NOM thought plan/NML-COP  
 “This is the plan/what Ken thought.”
- d. Kore-ga [ Ken-ga aruita ] tokoro/\*no-da.  
 this-NOM Ken-NOM walked place/NML-COP  
 “This is the place/where Ken walked.”

Free relatives are acceptable only in place of the corresponding relative headed by *mono* “thing”.<sup>17</sup> I will need a classification of nouns between [+thing] and [-thing] representing those characterized by *mono* and the others, respectively. But not all of these FRs with understood semantic class *mono* are possible at the second copular position as shown below.

- (41) Kore-ga itioo [CP saikooni Ken-ga kiniitteiru ] mono/\*no-da.  
 this-NOM more.or.less very.much Ken-NOM like thing/NML-COP  
 “This is more or less the thing/what Ken likes very much.”

The placement of *saikooni* “very much” is expected to limit the bound of the embedded CP and *itioo* “more or less” is to impose type  $\langle e, t \rangle$  reading on the interpretation of the second position. As in the case of bare common NP, a relative clause headed by *mono* “thing” can be ambiguous between types  $e$  and  $\langle e, t \rangle$ . But the sentence is acceptable only with  $\langle e, t \rangle$  reading. The fact that the corresponding free relative cannot appear here indicates that it is unambiguously type  $e$ .

The following is a test based on the assumption that conjuncts must have the same semantic types [Partee, 1986b].

- (42) a. Kore-ga yasukute $\langle e, t \rangle$ , [ Ken-ga kiniitteiru ] mono\* $e/\langle e, t \rangle$ /\*no-da.  
 this-NOM cheap (and) Ken-NOM like thing/NML-COP  
 “This is cheap and the thing/what Ken likes.”
- b. Kore-ga reino piano $e$ -de, [ Ken-ga kiniitteiru ] mono $e/\langle e, t \rangle$ /\*no-da.  
 this-NOM that piano-COP (and) Ken-NOM like thing/NML-COP  
 “This is that piano and the thing/what Ken likes.”

It was pointed out that since Japanese drops constituents relatively freely, the conjunction test may not be as good as in other languages. But without a pause after the first conjunct, the above results seem to be working. In comparison, if we insert a subject for the second conjuncts, the results turn out differently. Notice that in English, the situation is different. There is no difference between the headed and free relatives presumably due to the ambiguity of *the*.

Another test is to set the first NP to either type  $e$  or  $\langle e, t \rangle$  and see if the second NP can be equated (or predicate) the first. As we have seen in Copular Construction section, there is no copular sentence with type ‘ $\langle e, t \rangle - e$ ’.

<sup>17</sup>Masuoka and Takubo [1992] has a statement that *no* can replace a noun except for those representing a person (p. 161).

- (43) a. Iwayuru kuzira <sub>$\langle e, t \rangle$</sub> -ga [ Ken-ga mita-koto-ga-nai ] mono\* <sub>$e/\langle e, t \rangle$</sub> /\*no-da-  
 so.called whale-NOM Ken-NOM see-COMP-NOM-NEG thing/NML-COP  
 “So-called whale is the thing/what Ken has never seen.”
- b. Reino kuzira <sub>$e$</sub> -ga [ Ken-ga mita-koto-ga-nai ] mono <sub>$e/\langle e, t \rangle$</sub> /no <sub>$e$</sub> -da-  
 that whale-NOM Ken-NOM see-COMP-NOM-NEG thing/NML-COP  
 “That whale is the thing/what Ken has never seen.”

Again, in English, both headed and free relatives seem to behave ambiguously. From these data, we can conclude that Japanese free relatives can not form a predicate much like in Modern Greek [Iatridou and Varlokosta, 1995]. But as we have seen, wider range of free relatives are possible at the first copular position.

How about the argument positions of the verb?

- (44) a. [ Ken-ga ryoorisita ] mono/no-ga soko-kara otita.  
 Ken-NOM cooked thing/NML-NOM there-from fell  
 “The thing/what Ken cooked fell from there.”
- b. [ Ken-ga tazuneta ] person/\*no-ga soko-kara kita.  
 Ken-NOM visited hito/NML-NOM there-from came  
 “The person/who Ken visited came from there.”
- c. Reino doa-ga [ Ken-ga mita-koto-mo-nai ] mono/?\*no-ni kawatta.  
 that door-NOM Ken-NOM see-COMP-**mo**-NEG thing/NML-DAT changed  
 “That door changed into the thing/what Ken has never seen.”

Note that (c) is intended to force the DAT-marked argument to be type  $\langle e, t \rangle$  although this effect may not be perfect. But the basic pattern lines up with the case at the second copular position.

From these observations, I conclude the following:

- (45) External distribution of FRs except at the first copular position is possible if (i) its semantic class is [+thing], with the understood head of *mono* “thing”, and (ii) its semantic type  $e$ .<sup>18</sup>

Note that headed relatives can appear at all these positions. A question still remains: Why this is so? In English, some free relativization of adjunct is limited to specificational pseudocleft cases. Where does the special distributional properties associated with pseudoclefts come from? I have some discussion about adverbial case in Section 5.4.

### 3.3 Case Matching Effect

Case matching effect is a phenomenon which requires the case of the gap in a free relative to match the case of the entire FR assigned by the higher verb [Groos and van Riemsdijk, 1979][Bresnan and Grimshaw, 1978]. Grosu [1988] only lists Latin, Classical Greek, and Gothic as languages which totally lack matching effect. Japanese does not show any case matching effect either and must be added to the list as well. The following examples show this effect:

- (46) Q: Which problem appeared on the exam?  
 A: [ Ken-ga tetuya-de  $t$  benkyoosita ] -no-ga deta.  
 Ken-TOP all-night **ACC** studied -NML-**NOM** appeared  
 “What Ken studied all night appeared.”

- (47) Q: Which problem did Ken study?

<sup>18</sup>In an earlier draft, I tried to characterize the condition with respect to referentiality rather than semantic type. I still suspect that there may be cases within type  $e$  class but will leave this for a future study.

A: Ken-wa [ kyonen t siken-ni deta ] -no-o benkyoosita.  
 Ken-TOP last-year NOM exam-DAT appeared -NML-ACC studied  
 “Ken studied what appeared on the exam last year.”

### 3.4 Comparison with *whatever*

In Modern Greek, lack of specificational pseudoclefts is partially explained by the fact that the word *oti* is like *whatever* in English not being able to form a specificational pseudocleft [Iatridou and Varlokosta, 1995]. What about free relatives in Japanese? Do they line up with *whatever* or *what* in English? English *whatever* (or other *wh-ever*) seems to correspond to the following examples:

- (48) a. [ Ken-ga katta ] dore-mo-ga America-sanda.  
 Ken-NOM bought which-**mo**-NOM USA-made  
 “Whichever Ken bought was made in the USA.” (universal/conditional)
- b. [ Ken-ga katta ] dore-ka-ga America-sanda.  
 Ken-NOM bought which-Q-NOM USA-made  
 “Whichever Ken bought was made in the USA.” (don’t know)

Note that (a) and (b) correspond to the two distinct reading of *whatever* distinguished by Tredinnick [1994] and Iatridou and Varlokosta [1995]. These are different from the pattern of free relatives we have been looking at (below).

- (49) [ Ken-ga katta ] no-ga America-sanda.  
 Ken-NOM bought NML-NOM USA-made  
 “What Ken bought was made in the USA.”

The distinction between the two readings in (48) can be observed in the following examples with discourse reference:

- (50) a. [ Ken-ga kinoo katta ] dore-mo-ga America-sanda.  
 Ken-NOM yesterday bought which-**mo**-NOM USA-made  
 # Sore-wa taihen kooka-da.  
 it-TOP very expensive  
 “Whatever (universal/conditional) Ken bought yesterday was made in the USA.  
 It is very expensive.”
- b. [ Ken-ga kinoo katta ] dore-ka-ga America-sanda.  
 Ken-NOM yesterday bought which-Q-NOM USA-made  
 Sore-wa taihen kooka-da.  
 it-TOP very expensive  
 “Whatever (don’t know) Ken bought yesterday was made in the USA. It is very expensive.”

The free relative with *no* (NML) differs from the universal/conditional reading in this respect.

- (51) [ Ken-ga kinoo katta ] -no-ga America-sanda.  
 Ken-NOM yesterday bought -NML-NOM USA-made  
 Sore-wa taihen kooka-da.  
 it-TOP very expensive  
 “What Ken bought yesterday was made in the USA. It is very expensive.”

The free relative with *no* (NML) does not have the ‘don’t know’ reading as the following example show:

- (52) a. [ Ken-ga kinoo katta ] dore-ka-ga America-sanda.  
 Ken-NOM yesterday bought which-Q-NOM USA-made  
 Dore-ka sitteiru?  
 which-Q know  
 “Whatever (don’t know) Ken bought yesterday was made in the USA. Do you know which?”
- b. [ Ken-ga kinoo katta ] -no-ga America-sanda.  
 Ken-NOM yesterday bought -NML-NOM USA-made  
 # Dore-ka sitteiru?  
 which-Q know  
 “What Ken bought yesterday was made in the USA. Do you know which?”

From these data, Japanese free relatives with *no* (NML) is like *what* but not *whatever* in English in the observed aspect. Japanese free relatives are not like *oti* in Modern Greek either while they share some properties with *afto pu* free relatives except at the first copular position.

## 4 Pseudoclefts

Having observed that wide range of free relatives are available at the first copular position, we will move to the observation of pseudoclefts. Since Japanese does not face the conditions found in Modern Greek, which lacks the specificational reading, it is expected that we will see the similar phenomena observed in languages including English.

Some particular questions are as follows:

- (53) a. How to identify pseudoclefts in Japanese?  
 b. Do both predicational and specificational readings exist?  
 c. Does syntactic connectivity show up?  
 d. Do the analysis of the semantic types for copular construction and free relative extend to the analysis of pseudoclefts?

Except for the peculiar distributional constraints on free relatives and lack of determiner, Japanese pseudoclefts are like English. This is a welcome results since the properties of pseudoclefts look more universal.

### 4.1 Identification of Pseudoclefts

In this section, we will look at some of the previous work discussing pseudoclefts. Some of the examples seen below are actually not the pattern of pseudoclefts I am looking at. None of them explicitly mention about predicational and specificational readings.

Inoue [1976] presents the example to show binding connectivity:<sup>19</sup>

- (54) [ Tyanpion<sub>i</sub>-ga zimansita ] koto-wa zibun<sub>i</sub>-no tuyosa-da. (183a)  
 champion-NOM proud thing-TOP self-GEN strength-COP  
 “The thing which the champion was proud of is his strength.”

But as we will see later, this is not a good example to show binding connectivity. More careful analysis of reflexives is required. In addition, the above is a headed relative and does not exactly correspond to our pseudoclefts.

Nakayama and Koizumi [1991] provide the following example as a VP-pseudocleft:<sup>20</sup>

<sup>19</sup>Inoue cites Oyakawa [1976] for this example. The gloss and the translation are all mine in this section.

<sup>20</sup>The romanization is adjusted for compatibility.

- (55) [ John-ga sita ] -no-wa kaisya-ni tegami-o okuru-koto-da. (8a)  
 John-NOM did NML-TOP company-DAT letter-ACC send-COMP-COP  
 “What John did was to send a letter to the company.”

But this is not really a VP-cleft since the sentence should be considered as a result of the relativization of the CP from the following sentence:

- (56) John<sub>i</sub>-ga [CP  $\emptyset_i$  kaisya-ni tegami-o okuru-koto ] -o sita.  
 John-NOM company-DAT letter-ACC send-fact -ACC did  
 “John sent a letter to the company.”

As argued in Free Relatives section, no predicate can be relativized.

Kuroda [1992] has some related constructions as follows:

- (57) a. Taroo-wa [ Hanako-ga ringo-o sara-no ue-ni oita ]  
 Taroo-TOP Hanako-NOM apple-ACC plate-GEN on-DAT placed  
 -no-o tot-te,... (11), p. 148  
 -NML-ACC pick.up-and...  
 “Taroo picked up what Hanako placed (the apple) on the plate, and...”  
 b. Taroo-wa ringo-no akai-no -o tot-te,... (33), P. 155  
 Taroo-TOP apple-GEN red-NML -ACC pick.up-and...  
 “Taroo picked up (the apple) red one, and...”

(a) is an example of so-called ‘head-internal relative’ also found in native American languages.<sup>21</sup> (b) is an example of the same *no* (NML) is used to stand for some noun, “apple” in this case.<sup>22</sup>

Kamio [1991] writes: it is widely known that Japanese does not distinguish between it-clefts and pseudoclefts. For example, he presents the following example with translation corresponding to both clefts:

- (58) a. [ Taroo-ga katta ] -no-wa/ga tokei-da. (7c)  
 Taroo-NOM bought NML-TOP/NOM watch-COP  
 “What Taroo bought was a/the watch.” or “It was a/the watch that Taroo bought.”  
 b. [ Tokei-o katta ] -no-wa/ga Taroo-da. (7b)  
 watch-ACC bought NML-TOP/NOM Taroo-COP  
 “Who bought a/the watch was Taroo.” or “It was Taroo who bought a/the watch.”

Since Japanese does not have an expletive construction, it is questionable to relate the above sentences with it-clefts. But they are pseudoclefts and the same pattern will be examined in the following sections.

Sadakane and Koizumi [1995] argues that the case marker cannot appear at the second position but post-position can.

- (59) a. [ Kinoo piza-o tabeta ] -no-wa Mary-(\*ga)-da. (8a, 11a)  
 yesterday pizza-ACC ate NML-TOP Mary-NOM-COP  
 “Who ate pizza yesterday was Mary.”  
 b. [ John-ga tegami-o moratta ] -no-wa Mary-\*(kara)-da. (9a, 12a)  
 John-NOM letter-ACC received NML-TOP Mary-from-COP  
 “How John received the letter was from Mary.”

I will examine related examples focusing on the difference between predicational and specificational readings in Section 5.4.

<sup>21</sup> (a) is unacceptable in my dialect.

<sup>22</sup> An analysis of this type of construction is found in [Hoshi, 1995].

Before moving on, I will make a note of superficially ambiguous case. The following is an example of noun complement clause:

- (60) a. [ Ken-ga hanasi-o kiita ] -(**toiu**)-no-wa zizitu-da.  
 Ken-NOM story-ACC heard -COMP-NML-TOP truth-COP  
 “That Ken heard a/the story was a truth.”  
 b. [ Ken-ga  $\emptyset$  kiita ] -(**toiu**)-no-wa zizitu-da.  
 Ken-NOM (obj) heard -COMP-NML-TOP truth-COP  
 “That Ken heard it was a truth.”

Note that the same word used for free relative formation, *no* (NML), appears here. Since elements within the complement clause can be dropped, (b) above can have exactly the same surface string as the following pseudocleft:

- (61) [ Ken-ga *t* kiita ] -(\***toiu**)-no-wa zizitu-da.  
 Ken-NOM (obj) heard -COMP-NML-TOP truth-COP  
 “What Ken heard was a/the truth.”

In (60b), *toiu* (COMP) can be inserted between the complement clause and *no* but it is not the case for (61). *zizitu* “truth” in (60b) is a predicate but *zizitu* in (61) is ambiguous between predicate and a referential expression. Structural comparison between pseudoclefts and noun-complement construction is discussed in Section 5.3. Since Japanese is not a *wh*-movement language, indirect questions have a quite different form than free relatives and will not be compared here.

## 4.2 Predicational and Specificational Readings

In this section, we will see how predicational and specificational readings are identified. Let us take a look at the motivating example shown at the beginning of the paper, repeated below:

- (62) [ Ken-ga *t* katta ] -no-wa piano-da.  
 Ken-NOM (obj) bought -NML-TOP piano-COP  
 “What Ken bought was a piano.”

I argue that the above sentence is ambiguous just like the English counterpart. I will adopt the following characterization of predicational and specificational pseudoclefts:

- (63) a. Predicational pseudoclefts: The second copular constituent predicates the first copular constituent. A typical case is a type-‘ $e - \langle e, t \rangle$ ’ sentence.  
 b. Specificational pseudoclefts: Pseudoclefts which is not classified as predicational pseudoclefts.

This is consistent with the characterization found in Chapter 1 of [Higgins, 1979], those in [Williams, 1983], and [Heycock and Kroch, 1995]. It is not exactly the same as the classification introduced in Chapter 5 in [Higgins, 1979] and that for Modern Greek in [Iatridou and Varlokosta, 1995] in that not all non-predicational pseudoclefts are specificational. I will have comment on this in Section 5.1 and with an additional test in Section 5.2 but the main point of this section does not depend on this finer distinction. Although topic marker *wa* is used rather than nominative marker *ga* in some cases, all these examples must be considered under the condition that these are embedded with *ga*-marking given an appropriate context (cf. Section 2.1).

Now consider the following example:

- (64) a. Context: “Ken bought a strange stuff. What is it?”  
 [ Ken-ga katta ] -no-wa piano<sub>(e,t)</sub>-da. (predicational)  
 Ken-NOM bought -NML-TOP piano-COP  
 “What Ken bought was a piano.”



b. Context: “A piano and an organ were on sale yesterday. Which did Ken buy?”

[ Ken-ga katta ] -no-wa piano<sub>e</sub>-da. (specificational)  
 Ken-NOM bought -NML-TOP piano-COP

“What Ken bought was the piano.”

The two contexts disambiguate the reading of the pseudoclefts. *piano* in (a) predicates the free relative, which refer to the particular object Ken bought. In this case, the type of *piano* is  $\langle e, t \rangle$ . On the other hand, piano in (b) refer to a particular object already introduced into the discourse, of type  $e$ , and cannot be predicative. Note that the translation of each sentence in English has the same predicational/specificational reading. In order to show the distinct reading on a sentence, let us try the test introduced in Copular Construction section:

(65) a. [ Ken-ga katta ] -no-wa **itioo** piano-da.  
 Ken-NOM bought -NML-TOP more.or.less piano-COP

“What Ken bought was more or less a piano.”

b. [ Ken-ga katta ] -no-wa **reino** piano-da.  
 Ken-NOM bought -NML-TOP that piano-COP

“What Ken bought was that piano.”

(a) and (b) above can replace the sentences in (64a) and (64b), respectively, but not vice versa. As we have seen in Copular Construction section, *itioo* “more or less” modifies a predicate. On the other hand, *reino* “that” modifies only non-predicates.

Let us consider the inverses of the sentences. The acceptability of the inversion of (a) is basically like the inversion of predicative copular sentences.

(66) a. ? **Iwayuru** piano-wa [ Ken-ga katta ] -no-da. <sup>23</sup>  
 sort.of piano-TOP Ken-NOM bought -FRP-COP

“A sort of piano was what Ken bought.”

b. ?\* X-wa [ kakuzituni Iwayuru piano-ga Ken-ga katta -no-da ]  
 X-TOP certainly sort.of piano-NOM Ken-NOM bought -FRP-COP

-toiu hanasi-o kiita.

-COMP story-ACC heard

“I head the story that a sort of piano was what Ken bought.”

The judgement is not as clear probably due to the possibility that *iwayuru* “a sort of” can denote some unknown individual. The inversion of (65b) is perfectly fine.<sup>24</sup>

(67) **Reino** piano-wa [ Ken-ga katta ] -no-da.  
 that piano-TOP Ken-NOM bought -FRP-COP

“That piano was what Ken bought.”

So far, the situation parallels that in English. But there is a difference. Recall that the only possible free relatives at the second copular position are [+thing] and type  $e$ . Therefore, the following inversion is not possible:

(68) a. [ Ken-ga atta ] -no-wa reino gorufaa-da.  
 Ken-NOM met -NML-TOP that golfer-COP

“Who Ken met was that golfer.”

<sup>23</sup> *itioo* “more or less” does not work for an NP and replaced with *iwayuru* “so called”, which does not necessarily force  $\langle e, t \rangle$  reading but excludes referential status.

<sup>24</sup> This sentence and the original one may have different referentiality on the free relative. Cf. Subsection 5.1.

- b. \* Reino gorufaa-wa [ Ken-ga atta ] -no-da.  
 that golfer-TOP Ken-NOM met -NML-COP  
 “That golfer was who Ken met.”

But this distributional problem with free relatives seems orthogonal to the invertibility of specificational pseudoclefts.

Another difference is that Japanese specificational pseudoclefts do not show tense harmony as seen for English [Higgins, 1979]<sup>25</sup>. But it is not surprising that Japanese has different tense and mood system from English and does not show sequence of tense in general either.

We have seen that both predicational and specificational readings are possible in Japanese pseudoclefts. Ambiguous cases may arise when the second constituent is a bare common NP. The situation parallels that of post-copular definite NPs in English.

### 4.3 Syntactic Connectivity

One crucial way to exhibit the distinction between specificational and predicational readings is *syntactic connectivity*. Among various types of syntactic connectivity, frequently discussed type is binding connectivity and I will show that Japanese specificational pseudoclefts possess this property.

Binding phenomena in Japanese is often obscured by logophoric factors. *zibun-zisin* “oneself” is usually considered local subject-oriented anaphor [Katada, 1991].<sup>26</sup> But there is some room to suspect that the same form has the function of logophoric anaphor as seen in the following example:

- (69) Naomi<sub>i</sub>-wa [ Ken<sub>j</sub>-ga zibun-zisin<sub>??i/j</sub>-nituite hihantekida-to ] itta.  
 Naomi-TOP Ken-NOM oneself-about critical-COMP said  
 “Naomi said that Ken was critical of oneself.”

In the most natural reading, the binder of *zibun-zisin* is *Ken* but the binding by *Naomi* cannot be excluded. If the subject of the lower clause is replaced by a non-human as in the following example, the binding by *Naomi* becomes basically the only choice and the sentence is good.

- (70) Naomi<sub>i</sub>-wa [ kono hon<sub>j</sub>-ga zibun-zisin<sub>i/\*j</sub>-nituite hihantekida-to ] itta.  
 Naomi-TOP this book-NOM oneself-about critical-COMP said  
 “Naomi said that this book was critical of oneself.”

Although we cannot rely on the same test as in English, the above examples can be extended to see the difference in binding phenomena in pseudoclefts. Let us look at an example of predicational sentence.<sup>27</sup>

- (71) Naomi<sub>i</sub>-wa [ [ Ken<sub>j</sub>-ga yonda ] -no-ga zibun-zisin<sub>i/??j</sub>-nituite hihantekida-to ]  
 Naomi-TOP Ken-NOM read -NML-NOM oneself-about critical-COMP  
 itta.  
 said  
 “Naomi said that what Ken read was critical of oneself.”

This case lines up with (70) as expected. *Ken* does not c-command the reflexive under the standard assumption about the structure and thus is not expected to bind *zibun-zisin*. Now, the following is a closely related specificational pseudocleft:

<sup>25</sup> He cites Akmajian 1970b.

<sup>26</sup> I will gloss *zibun-zisin* as “oneself” while it is often glossed as “self-self”. The reason for this is that *zibun* part behaves like a noun. The situation should also be compared with the non-subject-oriented, gender-specific form, *kare-zisin* “himself”.

<sup>27</sup> As pointed out in Copular Construction section, this is not exactly a predicational pseudocleft. ‘NP+AdjP’ pattern is used to completely exclude specificational reading easily obtained in most of pseudoclefts in Japanese.

- (72) Naomi<sub>i</sub>-wa    [ [ Ken<sub>j</sub>-ga    yonda    ] -no-ga  
 Naomi-TOP        Ken-NOM    read        -NML-NOM
- reino    zibun-zisin<sub>??i/j</sub>-nituite-no    hihan-da-to        ]    itta.  
 that    oneself-about-GEN                    criticism-COP-COMP    said
- “Naomi said that what Ken read was that criticism of oneself.”

Although *Ken* does not c-command the reflexive, it binds *zibun-zisin* as if it is in (69). Specificational pseudoclefts in Japanese show binding connectivity. Also notice that the following inverse is good:

- (73) Naomi<sub>i</sub>-wa    [    reino    zibun-zisin<sub>??i/j</sub>-nituite-no    hihan-ga  
 Naomi-TOP        that    oneself-about-GEN                    criticism-NOM
- [    Ken<sub>j</sub>-ga    yonda    ] -no-da-to        ]    itta.  
 Ken-NOM    read        -NML-COP-COMP        said
- “Naomi said that that criticism of oneself was what Ken read.”

Binding by Naomi seems to get better in this order. There is one structural difference between (72) and (71). Only (72) contains a NP. I would like to exclude the possibility that this NP blocks the binding for some reasons. The following is a case where non-c-commanded *zibun-zisin* is within an NP.

- (74) Naomi<sub>i</sub>-wa    [ [ Ken<sub>j</sub>-ga    yonda    ] -no-ga  
 Naomi-TOP        Ken-NOM    read        -NML-NOM
- zibun-zisin<sub>i/??j</sub>-nituite-no    hihan-o        toriageta-to        ]    itta.  
 oneself-about-GEN                    criticism-ACC    covered-COMP        said
- “Naomi said that what Ken read covered the criticism of oneself.”

The same result as (71) is obtained. But this is not a predicational pseudocleft either, it is more illustrative if I can demonstrate the binding effect with true predicational pseudocleft with the same structure. Although it is difficult to construct an unambiguously predicational pseudocleft in Japanese, the following example should serve this purpose:

- (75) Context: “I know that Ken read the note. What did Naomi say about the note?”
- Naomi<sub>i</sub>-wa    [ [ Ken<sub>j</sub>-ga    yonda    ] -no-ga  
 Naomi-TOP        Ken-NOM    read        -NML-NOM
- kagekide,        osoraku    zibun-zisin<sub>i/??j</sub>-nituite-no    hihan-de-mo-aru-to        ]    itta.  
 radical-(and)    probably    oneself-about-GEN                    criticism-COP-also-COP-COMP    said
- “Naomi said that what Ken read was radical and also probably a criticism of oneself.”

Thus all these non-specificational cases resist the binding by *Ken*. From these data, I conclude that only specificational pseudoclefts show syntactic connectivity in Japanese, as in English.

Although not as visible as above, but there is a reason to believe that Japanese specificational pseudoclefts show case connectivity too. Consider the following example:

- (76) a. [ Ken-ga    katta    ] -no-ga    itioo        piano-(\*o)-da-    (predicational)  
           Ken-NOM    bought        -NML-NOM    more.or.less    piano-ACC-COP-
- “What Ken bought was more or less a piano.”
- b. [ Ken-ga    katta    ] -no-ga    reino    piano-(?o)-da-    (specificational)  
           Ken-NOM    bought        -NML-NOM    that    piano-ACC-COP-
- “What Ken bought was that piano.”

The predicational pseudocleft does not show case connectivity. Although the more natural way with specificational pseudocleft is without the case particle *o*, *o*-marking seems possible. In normal circumstances, *o* is

never expected at this position. Also note that *o* does not appear before *wa* although the underlying case is clearly *o* as follows:

- (77) Piano-wa Ken-ga katta.  
piano-TOP Ken-NOM bought  
“As for the piano, Ken bought it.”

## 4.4 Summary

Japanese has both predicational and specificational pseudoclefts. Predicational and specificational pseudoclefts basically correspond to predicative and equative copular sentences, respectively. As only equative copular sentences are invertible, only specificational pseudoclefts are invertible. Thus Japanese pseudoclefts share important properties of pseudoclefts with English. But due to the restriction on the distribution of free relatives, not all specificational pseudoclefts are invertible.

Except at the first copular position, Japanese free relatives behave similarly to *afto pu* free relative in Modern Greek (MG) but not like *oti* in MG or *whatever* in English. The difference from MG, existence of specificational pseudoclefts, comes from the property associated with the first copular position.

Inverse analysis (Moro via [Heycock and Kroch, 1995]) is possible but does not have the appeal it has for English. Inverse analysis would assume that there is an underlying structure comparable to English small clause. Specificational sentences would then be derived from the underlying structure. Since Japanese does not have a small clause, there is no empirical support for the underlying structure. As in the case of English, Japanese has true equative sentences, and the seemingly economical inverse analysis needs another base structure to start with [cf. Heycock and Kroch, 1995].

## 5 Discussion

This section includes some inconclusive data and arguments, which I feel I still should report. The topics are the following:

- (78) *a.* Referentiality  
*b.* *Which* test  
*c.* Structure of free relative  
*d.* More pseudoclefts

I hope the discussion in this section is a starting point of the future research.

### 5.1 Referentiality

As mentioned at several places in this paper, the issues surrounding referentiality seem important but elusive. In this section, I will briefly describe my problem related to referentiality.

My question here is the following: what is the semantic type of ‘the right person’ in the following example?<sup>28</sup>

- (79) *a.* John is the right person.  
*b.* The right person is John.

First, let us compare this with the following paradigm of inversions:

---

<sup>28</sup> Assume that no specific ‘the right person’ is in the context.

- (80) a. John is that person<sub>*e*</sub>.  
 b. That person<sub>*e*</sub> is John.

- (81) a. John is a doctor <sub>$\langle e, t \rangle$</sub> .  
 b. \*A doctor <sub>$\langle e, t \rangle$</sub>  is John.

(79) patterns with (80) but not with (81). If ‘the right person’ has type  $e$ , a simple description of the phenomenon would be possible: ‘ $e - e$ ’ is invertible but not ‘ $e - \langle e, t \rangle$ ’. This is what we have observed for Japanese copular sentences, possibly the result of lack of determiners. That is, we did not distinguish (79) from (80) in Japanese. But consider the following small clauses in English:

- (82) a. They consider John a doctor <sub>$\langle e, t \rangle$</sub> .  
 b. They consider John the right person.  
 c. \*They consider John that person<sub>*e*</sub>.

‘the right person’ lines up with type  $\langle e, t \rangle$ . All these suggest that the situation is more complicated. Is semantic type useless or too crude? If ‘the right person’ has type  $\langle e, t \rangle$ , it is a singleton since it must denote a unique individual. How does this condition affect the analysis?

I still think that semantic type is a useful classification but not enough to describe the phenomenon like this. Although it is not clear how the same type  $e$  can be distinguished for referential and non-referential status, we will probably need a more descriptive device. Some kind of dynamic semantics [e.g., Heim, 1982] seems to be a place to start.

One characterization from [Higgins, 1979]<sup>29</sup> is the following:

- (83) (Buridan’s Law) The reference of an expression E must be specifiable in some way that does not involve first determining whether the proposition in which E occurs is true.

This seems a correct statement about referential expression. But it would be difficult to determine if a free relative in a pseudocleft is referential or not, based on this.

One possibility to characterize the phenomena is the following:

- (84) a. ‘that person’ has type  $e$  and referential.  
 b. ‘the right person’ has type  $e$  but non-referential.  
 c. Only ‘ $e - e$ ’ sentences are invertible.  
 d. Small clause must consist of ‘referential–non-referential’ [cf. Heycock and Kroch, 1995].

Then specificational pseudoclefts must be ‘ $e - e$ ’ rather than ‘ $\langle e, t \rangle - e$ ’ but the free relative could be referential or non-referential.

In Chapter 5, Higgins [1979] argues that the pre-copular position of specificational pseudoclefts is not referential (p. 214) and then introduced two additional copular classes: identificational and identity. Higgins argues that “What you are looking at is a kangaroo” is three-way ambiguous between predicational, specificational, and identificational. The following is my example, hopefully contrasting specificational and identificational pseudoclefts:

- (85) Specificational:

A: Do you remember that old piano and that modern organ? Which did Ken buy?  
 B: What Ken bought was that piano. (the FR intended to be non-referential)

- (86) Identificational:

---

<sup>29</sup>Originally from Geach [1968].

- A: Do you remember that old piano and that modern organ?  
 B: Nobody would buy such expensive stuff. By the way, did you see the piece of furniture Ken bought for his wife?  
 A: Well, I did see the big stuff Ken bought. But, what Ken bought was that piano. (the FR intended to be referential)

‘What Ken bought and that piano are identical’ seems to be an acceptable answer in (86) but not in (85). But then, do we need to distinguish between specificational and identificational pseudoclefts with respect to referentiality? Williams would say that these are nonrigid-rigid (85) vs. rigid-rigid (86) [p. 42, Williams, 1994]. Nonrigid can be a predicate. In other words, he would say (85) is an inverse but (86) is not. But then the arguments against inverse analysis would apply [Heycock and Kroch, 1995]; it is not economical any more. Another possibility is that both (85) and (86) are equative sentences between type *e*’s and the difference is how this type is instantiated. Since this difference in instantiation is not accounted for within static semantics, e.g., traditional Montague-style semantics, the argument requires something else, probably, dynamic semantics.

If free relative can be clearly referential or non-referential, the following contrast must be possible:

- (87) a. They consider that piano what nobody wants to buy.  
 b. \*They consider that piano what John bought for \$1,000 at the store yesterday.

I was fascinated by the problem but left without concrete results. After working on dynamic semantics, I will challenge this problem again.

## 5.2 Which Test

As pointed out in [Iatridou and Varlokosta, 1995], Higgins’ and Williams’ tests do not agree in the identification of predicational and specificational readings of CP pseudoclefts. After going over Chapter 6 of [Higgins, 1979], I came to think that the following test would work well:

- (88) Original copular form: A COP B.  
 Test 1: Which COP also B, A or something else?  
 Test 2: Which COP also A, B or something else?

A hypothesis is as follows:

- | (89) | Test 1 | Test 2 | Result          |
|------|--------|--------|-----------------|
|      | Pass   | Fail   | Predicational   |
|      | Fail   | Pass   | Specificational |
|      | Pass   | Pass   | Ambiguous       |
|      | Fail   | Fail   | True equative   |

First, let us look at a series of simple copular sentences.

- (90) a. John is a doctor.  
 b. Which is also a doctor, John or somebody else?  
 c. \*Which is also John, a doctor or somebody else?  
 d. Result: predicational
- (91) a. John is the right person.<sup>30</sup>  
 b. Which is also the right person, John or somebody else?

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<sup>30</sup>In the reading where the right person is non-referential.

- c. \*Which is also John, the right person or somebody else?
  - d. Result: predicational
- (92)
- a. The right person is John.
  - b. \*Which is also John, the right person or somebody else?
  - c. Which is also the right person, John or somebody else?
  - d. Result: specificational
- (93)
- a. That person is John.
  - b. \*Which is also John, that person or somebody else?
  - c. \*Which is also that person, John or somebody else?
  - d. Result: true equative

What about pseudoclefts?

- (94)
- a. What John is is important to him.
  - b. Which is also important to him, what John is or something else?
  - c. \*Which is also what John is, important to him or something else?
  - d. Result: predicational
- (95)
- a. What John is is important to himself.
  - b. \*Which is also important to himself, what John is or something else?
  - c. Which is also what John is, important to himself or something else?
  - d. Result: specificational
- (96)
- a. What I don't like about him is his tie.
  - b. \*Which is also his tie, what I don't like about him or something else?
  - c. Which is also what I don't like about him, his tie or something else?
  - d. Result: specificational
- (97)
- a. What Ken bought was the piano.
  - b. Which is also the piano, what Ken bought or something else?
  - c. Which is also what Ken bought, the piano or something else?
  - d. Result: ambiguous

It seems that the test is consistent with what is supposed to be. I am curious about (37) in [Iatridou and Varlokosta, 1995].

- (98)
- a. What John claimed was that the earth is flat.
  - b. \*Which was also that the earth is flat, what John claimed or something else?
  - c. Which was also what John claimed, that the earth is flat or something else?
  - d. Result: specificational

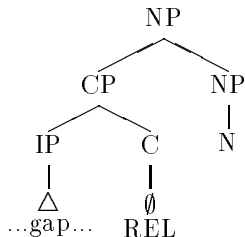
The test agree with Higgins but does not agree with Williams. I have tried this for many sentences in [Higgins, 1979] and saw agreement in general. The test works for Japanese modulo the constraint of free relatives in Japanese.

### 5.3 Structure of Free Relative

As we have seen already, the distribution of free relatives differ between at the first copular position and at all other positions. Are all these free relatives the same? If they are the same, where does the difference come from? Since all the free relatives have the same pattern ‘...gap...-no-wa/ga’, it seems natural to hypothesize there is one type of free relatives and the difference derives from some kind of restriction imposed by copula and other predicates. I will take this position and will see how far I can go.

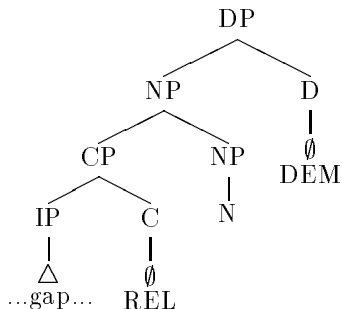
Before approaching free relatives, let us examine headed relatives. From the data presented in Section 3, I assume the following structure for headed relatives with  $\emptyset$  relative pronoun:

(99)



As seen in Section 2, a common NP can have different semantic types: e.g.,  $e$ ,  $\langle e, t \rangle$ , and  $\langle \langle e, t \rangle, t \rangle$ . This difference is in general not overtly marked. For a simple syntax-semantic interface, I will assume the idea in [Stowell, 1991] and type- $e$  constituents are actually DPs headed by  $\emptyset_{\text{DEM}}$  ( $\emptyset$  demonstrative); type- $\langle \langle e, t \rangle, t \rangle$  constituents are actually QPs headed by some quantifier. Thus type  $e$  headed relative have the following structure:

(100)



The word *reino* ‘‘aforementioned/that’’ is then considered a modifier of this DP but not an NP since it can modify the phrase including proper nouns like *Ken*.

This DP analysis is consistent with the commonly-held semantics of headed relatives: the intersection of the denotation of relative clause and the head noun. The referential status is obtained by  $\emptyset_{\text{DEM}}$  applied above this intersection. The branching within D is not supported by the data at this point since we only have seen  $\emptyset_{\text{DEM}}$ . But I will assume head-final configuration, which is overwhelming in Japanese.

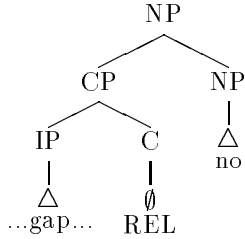
As a natural extension to the above, the structure of free relatives may look like the following:<sup>31</sup>

(101)

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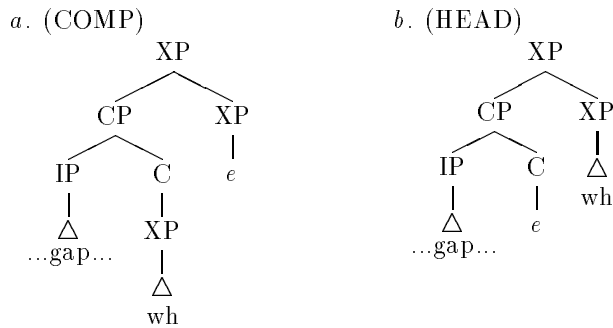
<sup>31</sup> This is close to a traditional analysis of *no* (NML) which Kuroda [1992] reports as post-relative pronominal (p. 158).





*no* (NML) is not like lexical elements at  $N^0$ . It is a formal, non-lexical phrasal element whose role is to nominalize the preceding CP. *no* is not like other nouns; it does not take specifier or complement.<sup>32</sup> Observing this property, I would call the above structure free relative although it is not headed by a *wh*-word as in English. This can be compared with the COMP and HEAD analyses for English free relatives adapted from [Groos and van Riemsdijk, 1979] for Japanese order:

(102)



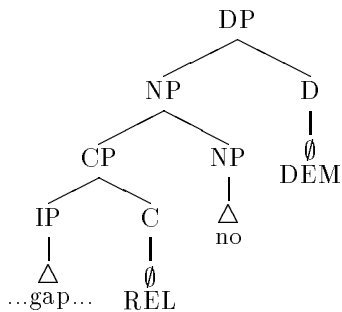
The Japanese case differs from both. Forcing the Japanese case into one of these patterns would be unacceptable. There is no support to place *no* at C since no *no* appears at the position in headed relatives.<sup>33</sup> Placing  $\emptyset$  relative with *no* would force matching effect, which is not observed in Japanese.

Now if we consider the set represented by *no* (NML) as the universal set, the intersection of the denotation of the relative and that of *no* is just the denotation of the relative; *no* does not have a semantic effect.

Matching effect is explained by either the existence of relative pronoun at the head of the topmost category (HEAD analysis [Groos and van Riemsdijk, 1979]) or at C (COMP analysis [Bresnan and Grimshaw, 1978]) with COMP accessibility condition. If neither of these conditions are met, no matching effect is expected. Since the structure for FR has  $\emptyset_{\text{REL}}$  at C and COMP accessibility is presumably blocked by the overt *no* at NP, no matching effect is expected. Thus the presented analysis is consistent with the observation.

For free relatives except at the first copular positions, the following structure is considered:

(103)



<sup>32</sup> Modification by adjunction will be seen shortly.

<sup>33</sup> Kuroda [1992] suggests this direction by calling *no* (NML) as nominalizing complementizer.

As in case of type  $\epsilon$  headed relative,  $\emptyset$  demonstrative heads the DP. One question is how the distribution of free relatives except at the first copular position can be restricted to the semantic class [+thing] of type  $\epsilon$ .

Let us turn to other instances of the form *no* and see if they are the same as *no* (NML). *no* is used in an NP without relative clause too. In the following, the structure of AdjP parallels the relative clause seen in the above examples.

- (104) a. nagai-no-ga  
 long-NML-NOM  
 “the long one”
- b.
- 

It is virtually indistinguishable from the following analysis either:

- (105) [ *t* nagai ] -no-ga  
 long -NML-NOM  
 “what is long”

Thus I consider this *no* as NML.

Next, consider the relation between NML and the genitive marker GEN. Genitive marker appears on the phrase which modifies a noun.

- (106) Ken-no hon-ga aru.  
 Ken-GEN book-NOM exists  
 “Ken’s book exists.”

GEN is like a case marker and is most likely a feature of the phrase. It can also mark NML as shown below.

- (107) [ kinoo kita ] -no-no hitori  
 yesterday came -NML-GEN one-person  
 “one of who came yesterday”

Note that *no-no* above cannot have the other order, GEN-NML; if so, the second *no* must be able to take another case particle, which is not true. Thus these two particles of the same form must be distinguished. *no* which can be case-marked are all NML. There is a case where the particles might appear in the order of GEN-NML underlyingly but only one *no* is seen at surface.

- (108) Ken-no-ga aru.  
 Ken-GEN/NML?-NOM exists  
 “Ken’s thing exists.”

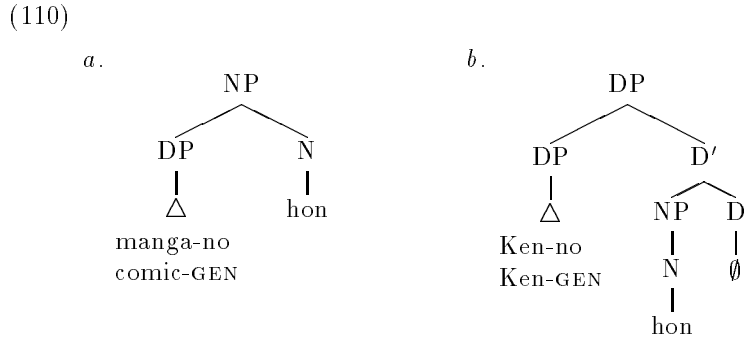
I will not go into the discussion of how this happens but there may be a similar phonological reason that either *no* is suppressed.<sup>34</sup>

The following is an example to show that Japanese genitive marker is quite different from English possessive 's.

<sup>34</sup> Cf. case particles such as *ga* and *o* are considered suppressed when further suffixed by TOP *wa*.

- (109) a. Kore-wa Ken-no hon-da.  
 this-TOP Ken-GEN book-COP  
 “This is Ken’s book.” (equative)
- b. Kore-wa manga-no hon-da.  
 this-TOP comic-GEN book-COP  
 “This is a comic book.” (predicative)

In (b), *manga-no* is a modifier like an adjective and not a determiner. Based on the above observation and following Abney [viaStowell, 1991] for the DP case, I will propose the following structures:



Note that ‘Ken-no’ can be placed at spec of NP and function as a modifier too. Otherwise, *ano* “that” in the following example, which must be heading a phrase above NP, cannot be explained:<sup>35</sup>

- (111) ano Ken-no hon-ga  
 that Ken-GEN book-NOM  
 “that book of Ken’s”

One potential problem Fukui [1995] mentioned as an argument against the existence of DP in Japanese can be seen in the following examples:

- (112) a. aoi Ken-no hon-ga  
 blue Ken-GEN book-NOM  
 “blue book of Ken’s”
- b. Kuno-sensei-no sono koogi-ga  
 Kuno-prof-GEN the lecture-NOM  
 “the lecture of Prof. Kuno”

If *ano* “that” precedes each sentence, the following results are obtained:

- (113) a. ano aoi Ken-no hon-ga  
 that blue Ken-GEN book-NOM  
 “that blue book of Ken’s”
- b. \* ano Kuno-sensei-no sono koogi-ga  
 that Kuno-prof-GEN the lecture-NOM  
 “that the lecture of Prof. Kuno”

In (a), *aoi* “blue” and *Ken-no* “Ken’s” recursively and restrictively modify *hon* “book” but the resulting structure is still NP. Thus *dono* can precede the entire phrase. On the other hand, ‘sono koogi’ (“the lecture”) in (b) is a DP. It can be non-restrictively modified by ‘Kuno-sensei-no’ (“Prof. Kuno’s”) but cannot be headed by *dono*. Non-restrictive relative can be formed without phonological marking such as pause as follows:

<sup>35</sup>The position of *ano* as a determiner is problematic. One possibility is that *ano* is at spec of DP and  $\emptyset$  determiner is at D.

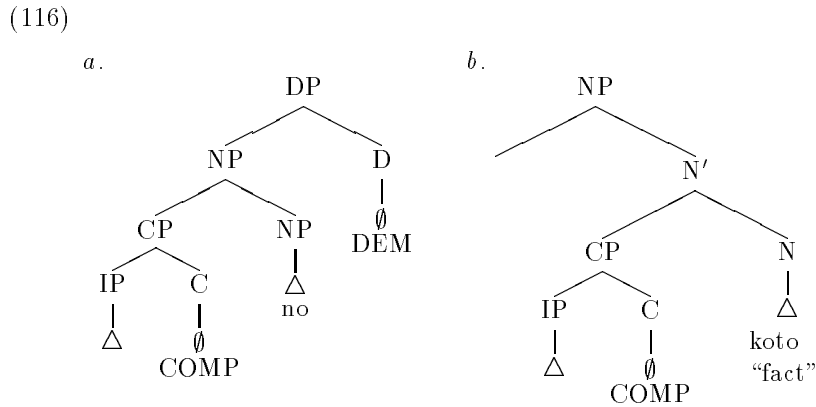
- (114) [ Naomi-ga t tazuneta ] Ken-ga  
 Naomi-NOM (ACC) visited Ken-NOM  
 “Ken, who Naomi visited”

Therefore, Fukui’s examples are not really against DP analysis.

Next, consider the case of noun-complement clauses where particle *no* of the same form appear.

- (115) a. [ Ken-ga kita ] -no-wa zizitu-da.  
 Ken-NOM came -NML?-TOP true-COP  
 “That Ken came is true.”  
 b. [ Ken-ga kita ] koto-wa zizitu-da.  
 Ken-NOM came fact-TOP true-COP  
 “The fact that Ken came is true.”

I will hypothesize the following analysis for the corresponding sentences above.<sup>36</sup>



First, DP/NP distinction between (a) and (b) can be shown by the following example:

- (117) a. \* Ano [ Ken-ga kita ] -no-ga zizitu-da.  
 that Ken-NOM came -NML-NOM true-COP  
 “That that Ken came is true.”  
 b. Ano [ Ken-ga kita ] koto-ga zizitu-da.  
 that Ken-NOM came fact-NOM true-COP  
 “That fact that Ken came is true.”

I hypothesized that *no* is not at  $N^0$  which may take specifier or complement for free relatives. The same structure seems to be applicable here. One evidence is that insertion of adjective differs between (a) and (b) as follows:

- (118) a. \* okasina [ Ken-ga kita ] -no-wa zizitu-da.  
 strange Ken-NOM came -NML-TOP true-COP  
 “Strange that Ken came is true.”  
 b. okasina [ Ken-ga kita ] koto-wa zizitu-da.  
 strange Ken-NOM came fact-TOP true-COP  
 “The strange fact that Ken came is true.”

The semantics of (115a) is then that of CP as in the case of free relative.

<sup>36</sup>Josephs [1976] proposes a similar analysis except no DP analysis was available at the time.

## 5.4 More Pseudoclefts

I will go over a few more varieties of pseudoclefts, which are more challenging than the cases we saw in the previous sections.

### 5.4.1 Quantified Phrases

Normally copular construction does not allow quantified NPs at the second position as we have seen in an earlier section. But pseudoclefts allow such a construction:

- (119) [ Koko-ni kita ] -no-ga takusanno hito-tati-da-  
 here-DAT came -NML-NOM many person-PL-COP-  
 “Who came here was many people.”

Then it is natural to consider the above as an example of syntactic connectivity associated with specificational pseudoclefts. The above has exactly the same truth-conditional interpretation as the following:<sup>37</sup>

- (120) Takusanno hito-tati-ga koko-ni kita.  
 many person-PL-NOM here-DAT came  
 “Many people came here.”

The question is: what is the relationship between the first and second copular positions? Since the quantified phrase fits naturally in the free relative, let us consider reconstruction first. Consider the following examples in English:

- (121) a. Who I didn't see was many of the people. (unambiguous scope: many-neg)  
 b. I didn't see many of the people. (ambiguous scope: many-neg, neg-many)

If specificational reading is analyzed by reconstruction, the difference in scoping is unexpected and problematic. The same situation is observed in Japanese.

- (122) a. [ Watasi-ga mi-nakat-ta ] -no-wa takusanno hito-tati-da. (many-neg)  
 I-NOM see-NEG-PAST -NML-TOP many person-PL-COP.  
 “Who I didn't see was many people.”  
 b. Watasi-wa takusanno hito-tati-o mi-nakat-ta. (many-neg, neg-many)  
 I-TOP many person-PL-ACC see-NEG-PAST  
 “I didn't see many people.”
- (123) a. [ Watasi-ga mi-nakat-ta ] -no-wa zen'in-da. (all-neg)  
 I-NOM see-NEG-PAST -NML-TOP all.people-COP.  
 “Who I didn't see was all the people.”  
 b. Watasi-wa zen'in-o mi-nakat-ta. (all-neg, neg-all)  
 I-TOP all.people-ACC see-NEG-PAST  
 “I didn't see all the people.”

What about inverse analysis? The subject connectivity of Williams [1983] is about surface structure and not about LF. It is possible to state a similar LF constraint associated with inverse structure. But, then, why doesn't it apply to subject-predicate relation in normal order?

Equational analysis [Heycock and Kroch, 1995] seems to work for this case. In this analysis, the quantified phrase cannot be an arbitrary quantified phrase. It must be a set which can be equated with another set. For example, the following would not stand in equational relation and is bad as predicted:

---

<sup>37</sup>The difference is pragmatic.

(124) \*Who we saw was few people.

The semantics is a challenge. A quantified phrase must be shifted to a non-quantified phrase. I will leave this as a future topic.

#### 5.4.2 Adverbials

So far, the data from Japanese has been consistent with the analysis of Heycock and Kroch [1995]. The ones in this section seems to pose a problem.

Consider the following sentence:

(125) Ken-ga      **kankiri-de**      kono   kan-o      aketa.  
Ken-NOM      can.opener-with      this   can-ACC      opened  
“Ken opened this can with a/the can opener.”

There are two ways to construct pseudoclefts of adjunct based on the above sentence.

(126) *a.* [ Ken-ga    *t*   kono   kan-o      aketa    ] -no-ga      kankiri-da-  
         Ken-NOM      this   can-ACC      opened      -NML-NOM      can.opener-COP  
         “What Ken opened this can with is a/the can opener.”  
*b.* [ Ken-ga    *t*   kono   kan-o      aketa    ] -no-ga      kankiri-de-da-  
         Ken-NOM      this   can-ACC      opened      -NML-NOM      can.opener-with-COP  
         “How Ken opened this can is with a/the can opener.”

(*a*) can be predicational or specificational, which can be tested by *itioo* “more or less” and *reino* “that” as in the previous section. (*b*) is specificational since adverbial phrase cannot predicate. In both (*a*) and (*b*), the first position is a NP-type, being case-marked. But the second position differs between a NP and adverbial phrase. (*a*) fits into either predicative or equative copular sentence depending on the reading, predicational or specificational. (*b*) does not fit into the types of copular sentences we have been looking at. Heycock and Kroch [1995] argues that all specificational pseudoclefts are equational. But (*b*) does not fit this description either.

The translation in (*b*) can be replaced by “The way how Ken opened this can is with a/the can opener”. Similarly, we can replace *no* in (*b*) with *hoofoo* “way” and obtain a headed relative. This suggests that semantically, the sentence is like equational although syntactically not.

As observed by Bresnan and Grimshaw [1978], adverbial free relatives in English has mixed distribution between as adverbial phrase and NP. Thus there is some kind of syntax-semantics mismatch which must be studied in a larger context.

Actually, this is not limited to NP-adverbial case. This is a problem spans wider range. For example, “What Ken is is happy” is a NP-adjective.

Now consider the adverbial complementation, a type of copular complementation observed for English by Quirk et al. [1985]. The following are examples in Japanese closely corresponding to the English counterpart:

(127) (p. 731)

*a.* Sono   tamago-ga   anata-ni-da-  
      that   egg-NOM      you-to-COP  
      “The eggs are for you.”

*b.* Hondo-e-no      oodan-ga      ferii-de-da-  
      mainland-to-GEN      crossing-NOM      ferry-by-COP  
      “Transport to the mainland is by ferry.”

The second copular position is not a predicate. ‘that egg’ in (a) is not a member of ‘for you’. More plausible interpretation is the adverbial phrase modifies a clause related to the first position.

- (128) a. [ Sono tamago-ga ataerareru ] -no-ga anata-ni-da-  
           that egg-NOM given -NML-NOM you-to-COP  
           “How the eggs are given is for you.”
- b. [ ∅ Hondo-e oodan-suru ] -no-ga ferii-de-da-  
       (subj) mainland-to crossing-do -NML-NOM ferry-by-COP  
       “How one transport to the mainland is by ferry.”

If we analyze the adverbial complementation of copular sentences as above, they can be analyzed as a specificational pseudocleft. Then this decrease the number of the copular sentence types and reduces the problem to the categorial inequality, which exists anyway.

The relational case introduced in Copular Construction section may also be analyzed in a similar way.

- (129) a. Ken-wa banana-da.  
           Ken-TOP banana-COP  
           “What Ken {wants to eat, likes, etc.} is a banana. (lit, Ken is a banana.)”
- b. [ Ken-ga tabeta/sukina/etc. ] -no-ga banana-da-  
       Ken-NOM ate/like/etc. -NML-NOM banana-COP  
       “What Ken ate/likes/etc. is a banana.”

(a) may have an underlying form like (b).

### 5.4.3 Double NPs

A peculiar pattern of pseudoclefts are found. Neither inverse nor equational analysis seem to have a straightforward account. In this case, a type of reconstruction may be possible.

- (130) a. [ Ken-ga syookaisita ] -no-ga Naomi-o Erika-ni-da-  
           Ken-NOM introduced -NML-NOM Naomi-ACC Erika-DAT-COP-  
           “Who Ken introduced was Naomi to Erika.”
- b. [ Ken-ga syookaisita ] -no-ga Erika-ni Naomi-o-da-  
       Ken-NOM introduced -NML-NOM Erika-DAT Naomi-ACC-COP-  
       “Who Ken introduced was to Erika, Naomi.”
- c. [ Erika-ni syookaisita ] -no-ga Ken-ga Naomi-o-da-  
       Erika-DAT introduced -NML-NOM Ken-NOM Naomi-ACC-COP-  
       “Who introduced to Erika was Ken, Naomi.”
- d. \* [ Erika-ni syookaisita ] -no-ga Naomi-o Ken-ga-da-  
       Erika-DAT introduced -NML-NOM Naomi-ACC Ken-NOM-COP-  
       “Who introduced to Erika was Ken, Naomi.”

I initially thought about the following example as a similar case.

- (131) This trip is from London to New York.

But the Japanese case involves case-marked NPs, which is puzzling.

## 6 Conclusion

The main results of this paper is that Japanese has both predicational and specificational pseudoclefts and only specificational pseudoclefts show syntactic connectivity. Comparison with English regarding several aspects were discussed and the analysis for English seems to extend to Japanese in a straightforward manner. As we have seen, reconstruction has the problem with scoping in pseudoclefts of quantified phrases in both languages in the same way. Due to lack of small clause, inverse analysis is not supported by the Japanese data. Equational analysis has problem with categorial equality but otherwise consistent with the data well.

This was an excellent opportunity for me to learn things about pseudoclefts, language-specific problems with Japanese, and general linguistic methods. But there are many things I needed to leave unaccounted for or for future research. The following is a list of things I would like to pursue as the next steps continuing this work:

- (132) a. Referentiality and semantics
- b. The special property of the first copular position in Japanese, in relation to the structure of free relative
- c. Wider range of pseudoclefts including: quantified phrase, adverbials, and CP in Japanese and English

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